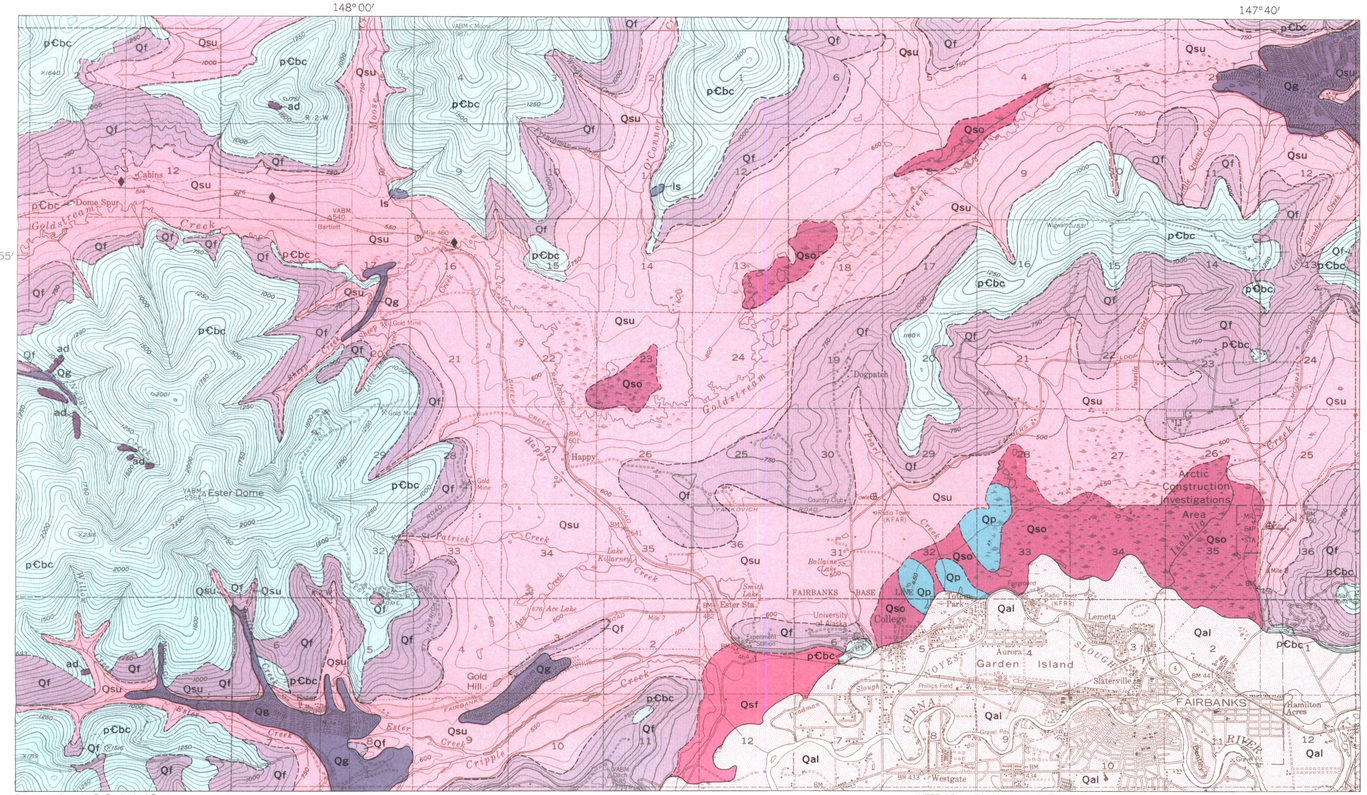
UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

BULLETIN 1111
PLATE 43

148°00′ 147°40′ 64°55′



Base map from U. S. Geological Survey topographic quadrangles Fairbanks D–2, 1956, and Fairbanks D–3, 1949

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—10437

Geology by Troy L. Péwé, 1947–55

GEOLOGIC MAP OF PART OF THE FAIRBANKS AREA, ALASKA

SCALE 1:63 360

1 ½ 0 1 2 3 MILES

CONTOUR INTERVAL 50 FEET
DATUM IS MEAN SEA LEVEL

EXPLANATION

A blanket of sediments of Quaternary age a few inches to several hundred feet thick covers nearly all the mapped area. These sediments are not shown on the map where less than 3 feet thick

YUKON-TANANA UPLAND

Qf

Fairbanks loess

Massive homogeneous unconsolidated eolian silt 3 to 100 feet thick on upper slopes and hilltops; well sorted; less than 10 percent clay; grains angular, consist mostly of quartz, feldspar, and mica; locally cemented by iron oxide; locally calcareous; buff to tan gray when dry, brown when wet

UNCONFORMITY

Qg

Reworked creek gravel

As mapped, gravel is placer-mine dredge tailings. Undisturbed gravel exposed in walls of excavations; consists of well-stratified layers and lenses of poorly sorted angular to subrounded auriferous sandy creek gravel; buff to brown with much iron staining; cobbles as much as 24 inches in diameter, composed mostly of quartz, gneiss, and schist. Locally perennially frozen

SEDIMENTARY ROCKS

Qsu Qsf Qso Qp

Perennially frozen silt

Qsu, *massive homogeneous unconsolidated eolian silt 1 to 300 feet thick; less than 10 percent clay. Grains angular; consist mostly of quartz, feldspar, and mica; locally cemented by iron oxide. Deposit contains organic material, especially in valley bottoms; color ranges from buff to brown to gray.*

Qsf, *silt, 2 to 30 feet thick, composing alluvial fans over flood-plain alluvium; small organic content.*

Qso, *organic silt, unconsolidated; 1 to 100 feet thick; organic material, both plant and animal; well sorted; less than 20 percent clay; brown to grayish black; locally mottled by decomposed vegetation. Contains large oval areas of peat,* Qp, *with high ice content; composed of dense undecomposed plant remains consisting mostly of* Sphagnum *mosses; color brown to black*

Ground ice abundant except in Qsf, *where it is mainly interstitial*

TANANA LOWLAND

Qal

Flood-plain alluvium

Well-stratified layers and lenses of unconsolidated gray silt, sand, and rounded river gravel; gravel consists mostly of quartz and gneiss. Permafrost discontinuous. Low ground ice content; mostly interstitial

IGNEOUS AND METAMORPHIC ROCKS

ad

Altered dike rock

Gray to yellowish-brown porphyritic medium-grained granitic rocks composed mainly of quartz and feldspar; highly weathered

pCbc ls

Birch Creek schist

pCbc, *gray to brownish graphite, quartz-calcite and quartz-mica schist, amphibolite, quartzite, slate, and gneiss, seamed with quartz stringers. Original bedding largely obliterated. Locally weathered to depths of more than 50 feet. Contains local pods of coarse-grained white limestone,* ls

Contact

Dashed where indefinite, gradational, or inferred

Frost-action study of railroad bridge

Subsurface-temperature recording site

QUATERNARY
MESOZOIC
PRECAMBRIAN